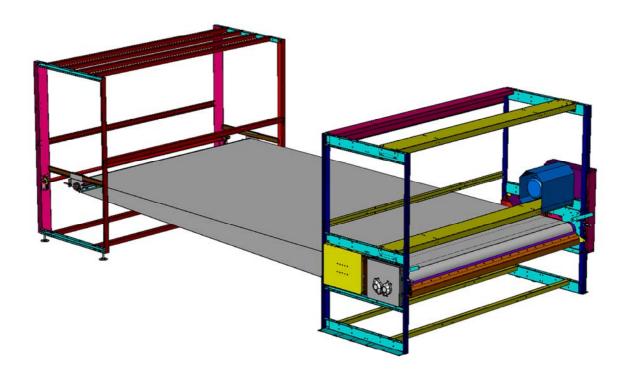
# User Manual Manure belt drive unit





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#### 1 Foreword

#### 1.1 This manual

This manual is made as a reference book for the machine that is mentioned on the cover of this document. Only qualified users can use and maintain this machine in a safe way. Keep the manual in the same place near the machine. If the manual gets lost order a new one via your supplier.

This manual provides you with information about safety, technical specifications, operation and maintenance. Take your time to read this document carefully before using the machine.

The machine is developed with all care and meets the CE-marking. Therefore it is not allowed to modify the machine.

The machine is inspected thoroughly before delivery to you.

Note the registration number of the machine. You can find this number on the production label of the machine. Make sure to have this number at hand in case you want to contact the service department of you supplier.

Vencomatic is not responsible for damage or injury caused by not following the instructions mentioned in this manual.

#### 1.2 Manual

Everyone working with or near the machine should know the contents of this manual. Follow the instructions in the manual. The management should instruct the personnel according to this document and follow all regulations and suggestions.

Never change the order of the to do actions.

Keep this manual during the lifetime of this machine in the same place near the machine. The manual should be at the users disposal.

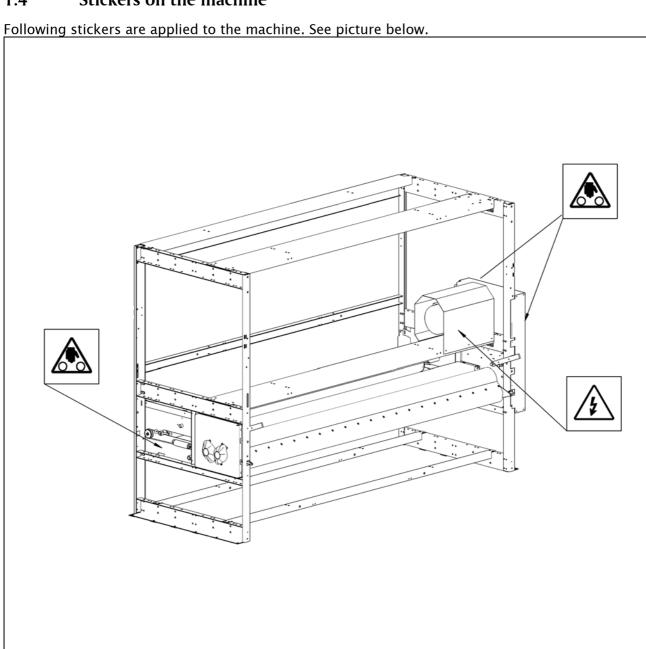
#### 1.3 Document codes

The document code consists of six parts:

- Field 1: document type
- Field 2: product type
- Field 3: version number
- Field 4: language code
- Field 5: month of publication
- Field 6: year of publication



## 1.4 Stickers on the machine





#### 1.5 Icons in this document

In the manual of this machine the following icons are used:



Careful

Procedures that can cause damage to the product, surroundings or environment. This damage can occur if procedures are not carried out carefully.



Warning

Danger for electricity / electrical power.



Remarks, suggestions and advices.



Pull out the plug first before proceeding operation.



Consult the indicated Information source first.



Protect against water and moisture.



Watch out!

Procedure that needs extra attention.

#### 1.6 Available documentation

The following documentation of the Manure belt drive unit is available:

• User manual (Manure belt drive unit MBA 01-en/May -2005)



#### 1.7 List of terms

In this manual the following terms are used:

**Technician** A trained -and therefore acquainted with the applied

technique- expert familiar with the possible dangers of the machine. Technicians have a minimum age of 19 years. They have a solid knowledge of transport techniques. Technicians are authorized to transport, install, place in operation and repair the machine.

**Authorized user** See 'User'. The 'authorized user' is also authorized to

install and commission the machine.

**User** The customer using the machine according to the

purpose detailed in the concerning user manual. The user is responsible for the operation and the in the user manual described periodic adjustment, cleaning and

maintenance of the machine.

**Transportbandsysteem** Aanduiding voor elke mogelijke variant van de machine.

**Component** Aanduiding voor ieder los te schakelen deel van de

machine.

**Flock** Indication for the economic life cycle of the chickens.

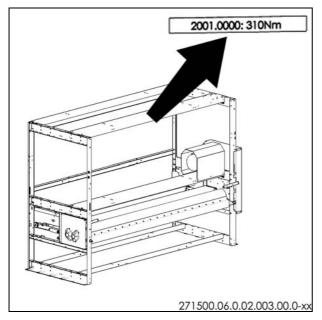
#### 1.8 Service and technical support

When an item is not discussed in this manual contact your local Vencomatic dealer for information about specific procedures.



#### 1.9 Identification of the system

The production label is placed on the drive unit. See picture below.



The number on the production label represents the order number.

#### 1.10 The machine and the environment

#### 1.10.1 Packaging material

The packaging material mainly consists of:

- (corrugated) cardboard
- (untreated) wood
- plastic packaging material

Inform the customer to inquire about the possibilities for recycling and environmentally friendly disposal / re-use of the packaging materials.

#### 1.11 Discard the machine

Discarded machines should be disposed of in an environmentally friendly way according to the local regulations. The used materials can be subdivided roughly in:

- plastic (egg carrier on chain, dirt tray, various plugs)
- untreated metal (shafts)
- coated metal (motor and bearing block)
- galvanized metal (sheet metal, fastening materials, legs)
- aluminum (side profiles of section)
- oil and grease (in motor, bearing block and oil lubrication system)

If an electrical control panel is supplied:

The printed circuit board(s) and their components in the control panel are electrical waste.



#### 1.12 General safety instructions

Vencomatic B.V. will not accept any claim for damage or injury caused by not following the safety regulations and safety instructions, or carelessness during:

- transport,
- installation.
- commissioning,
- operation,
- maintenance,
- troubleshooting and repair,

of the machine and possible accessories. Depending on specific working circumstances or additional accessories, additional safety regulation can be needed. If during previous the aforementioned activities a potential danger occurs, please contact Vencomatic B.V. immediately.

#### 1.12.1 Installation manual / user manual

- Every technician has to know the contents of the installation manual. The technician must follow the instructions in the installation manual conscientiously.
- Every (authorized) user has to know the contents of the user manual and follow the instructions in the user manual conscientiously.
- Never change the order of the "to do" actions.
- · Store this manual carefully.

#### 1.12.2 Stickers and instructions on the machine

Stickers, symbols and instructions are an integral part of this machine's safety precautions. It is therefore not allowed to cover them up and / or remove them. They have to be present and legible during the whole life cycle of the system.

• Replace or repair illegible stickers, symbols and instructions immediately.

#### 1.12.3 Technician

Transport, installation and commissioning of the machine is allowed for authorized and trained technicians only. (See 'Terms and Definitions'.) While carrying out their work they are always fully responsible for compliance of local safety regulations and guidelines. Temporary personnel and persons in training are allowed to work with the machine under supervision of an authorized technician only.

#### 1.12.4 Authorized users

An authorized user is the customer using the machine. This use is in accordance with the purpose of the user guide. The user is responsible for the operation of the machine. The user takes care of periodic adjustment, cleaning and maintenance of the machine. These items are written down in the user manual.

The 'authorized user' is also authorized for installation and commissioning of the machine.



#### 1.12.5 Technical specifications

The technical specifications cannot be changed.

#### 1.12.6 Modifications

Modification of (or parts of) the machine is not allowed. Use original (spare)parts advised by the manufacturer only.

#### 1.13 Taken safety measures for this machine

The following safety measure protections are present:

- Guard for transfer brush on drive unit.
- Warning stickers, see 'Stickers on the machine'.
- Electrical protection, see 'Manual Electrical Control Panel'.

#### 1.14 CE-marking, intended use

#### 1.14.1 Machinery directive

The machine is constructed according to the machinery directive. Therefore the machine is CE-marked.

CE-marking means that the machine at the time of delivery met the CE-requirements applied to the machine at that moment. The responsibility for CE-conformity for the machine expires entirely or partly and changes to the buyer if the following conditions are not observed:

The CE-marking is applied only to the machine.

- The machine can only be used in observance with the contents of this user manual.
- The machine can only be used within the range of the products specifications.
- The original state of the machine cannot be changed without written authorization of Vencomatic B.V.

#### 1.14.2 Purpose Manure belt drive unit

The Manure belt drive unit is a machine ton drive the manure belt.

Every other or further use is not regarded conform the purpose. Vencomatic is not responsible for damage or injury because of this. The machine is constructed according to the valid requirements and standards. Use the machine only in technical perfect state, conform previous mentioned purpose.

#### 1.14.3 Use according to purpose

The "Use according to purpose" as recorded in the EN 292-1 is the use where the technical product according to its specifications -including its possibilities according to the sales brochure-is capable of. When in doubt this is the use that seems obvious resulting from construction, type and function of the product. "Use according to purpose" also includes following the instructions in the user guide.



#### 1.15 Warranty regulations

The warranty regulations applied to the machine are recorded in the terms of delivery and payment of Vencomatic BV, registered at the chamber of commerce in Eindhoven with number 873/94.

The warranty has a validity of 12 months.

The warranty expires if:

- The warranty validity is past 12 months.
- Not authorized changes and / or modifications are applied to the machine.
- Parts and consumer goods that are not supplied by the manufacturer are applied.
- The maintenance is not carried out according to the indications in the manual.
- The machine in not set up conform the guideline indicated by Vencomatic.
- The machine is installed incompetently.



## 2 General description

#### 2.1 Description Manure belt drive unit

The Manure belt drive unit is not made up of modular components. This means that different positions are not possible.

#### 2.2 Purpose / use

The Manure belt drive unit is designed to drive a manure belt.

#### 2.3 Productspecifications

Only manure belts driven with this machine.



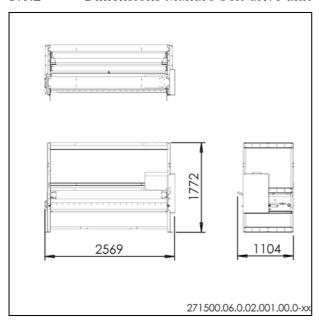
## 3 Technical data

#### 3.1 Technical data Manure belt drive unit

#### 3.1.1 General Manure belt drive unit

Description	General
Material	Sendzimir, RVS, PUR, PA, SBR

#### 3.1.2 Dimensions Manure belt drive unit



#### 3.1.3 Electrical installation Manure belt drive unit

Description	Power (Watt)	Mains voltage (V)	Oil V (liter) **
Motor SK01-71 L/4 0.37KW n=27	0.37	3x230 / 3x400	0.25
Motor SK25-80 L/4 0.75KW n=25	0.75	3x230 / 3x400	0.7
Motor SK305-90 L/4 1.1KW n=22	1.1	3x230 / 3x400	1.4

<sup>\*</sup> motor type to be installed after consultation with dealer

<sup>\*\*</sup> Oil: 100% synthetic, class ISO VG 220



Electrical data is subject to changes.



## 4 Transport

## 4.1 Transport safety regulations

See also 'General safetyprescription and -instructions '.



## 5 Storage

## 5.1 Storage safety regulations

- See also 'General safety instructions'.
- Respect the surrounding conditions. Never store the system in a room where the temperature can get under +10 °C. Lower temperatures can damage sensitive parts.
- Store the system in a dry and dust free room.
- Place the system on a level floor.
- Never place heavy products on top of lighter products.



## 6 Operation

#### 6.1 Operation elements

The machine is operated from the central control panel.

#### 6.2 Emergency stop

On the electrical control panel there is an emergency stop.

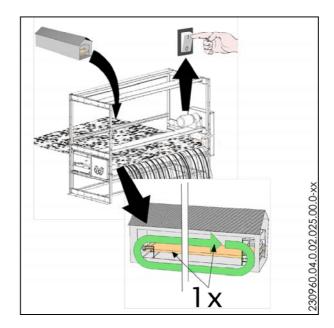
See also 'Manual Electrical Control Panel' for further information.

#### 6.3 Clean Manurebelt

- 1. Tighten scraper
- 2. Switch on manure belt drive unit on the central control panel
- 3. Let the manure belt make one rotation
- 4. Switch off manure belt drive unit on the central control panel
- 5. Loosen scraper



Never run the manure belt unattended





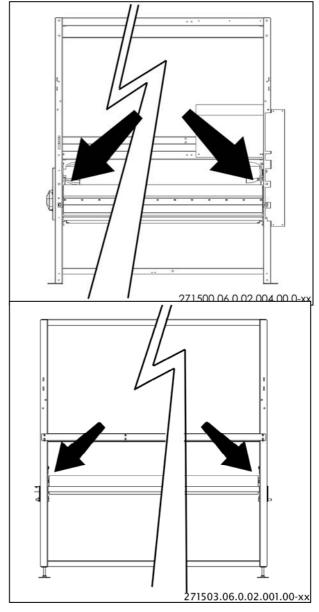
6.4 Manure belt

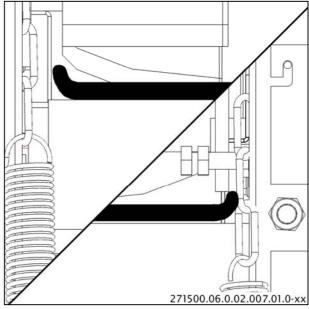
6.4.1 check manure belt position



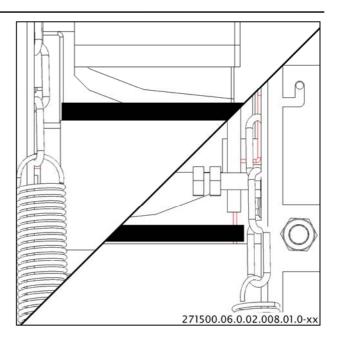
Disconect all electrical connections before proceeding operation.

- 1. Check if the manure belt does not touches the sides. At the manure belt drive side as well as the return side
  - Position manure belt in figure 271500.06.0.02.007.01.0-xx is incorrect
  - Position manure belt in figure 271500.06.0.02.008.01.0-xx is correct











- 6.4.2 Regulate manure belt position
- 6.4.2.1 Manure belt position to much on the right or the left

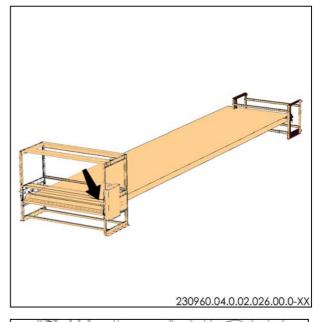


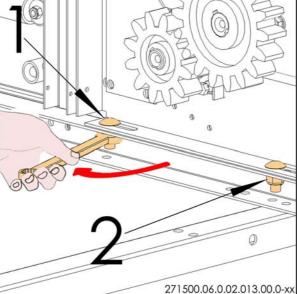
Disconect all electrical connections before proceeding operation.

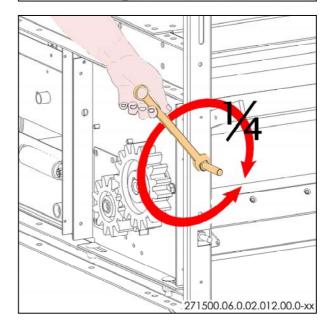
- 1. Loosen bolts on position 1 en 2
- 2. Regulate the manure belt position in the desired direction by twisting the adjusting bolt ¼ turn
- 3. Fasten bolts on position 1 en 2
- 4. Switch on manure belt drive unit on the central control panel
- 5. Let the manure belt run and judge the regulation (see also: 6.3 Clean Manurebelt)
- 6. If necessary repeat step 1 up to and including 5 till the position of the manure belt is correct



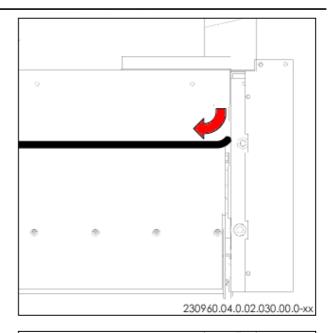
Never carry out these instructions on the motor side.

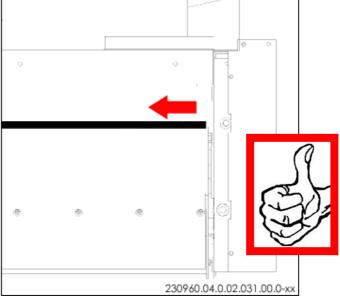




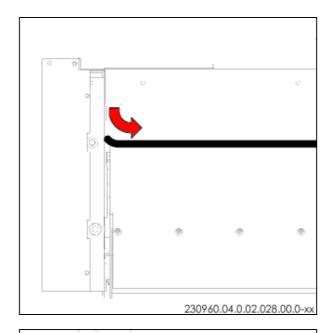


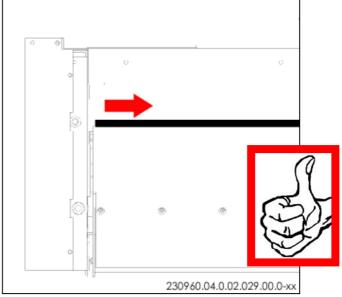














### 6.5 Scraper

#### 6.5.1 Tighten scraper



Disconect all electrical connections before proceeding operation.

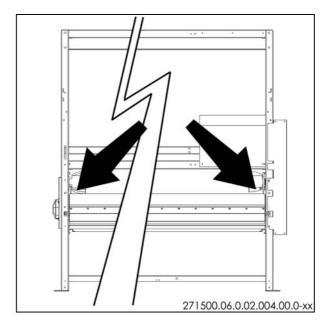
- 1. Hook the lever by lifting and moving sideways
- 2. Repeat step 1 for the left side of the Manure belt drive unit

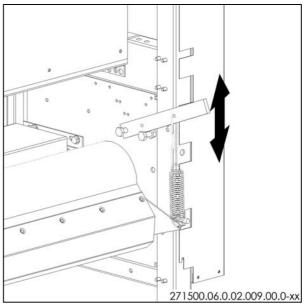
#### 6.5.2 Release scraper



Disconect all electrical connections before proceeding operation.

- 1. Release the lever by lifting and moving sideways
- 2. Repeat step 1 for the left side of the Manure belt drive unit







#### 6.6 Pinch roller

6.6.1 Tighten pinch roller

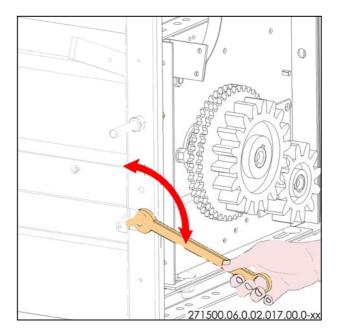


Disconnect all electrical connections before proceeding operation.

1. Turn the adjusting bolt to the right to tighten the pinch roller



The position of the pinch roller should be equal for left-hand side as well as for the right-hand side, this to prevent the deviation of the manure belt



#### 6.6.2 Loosen pinch roller

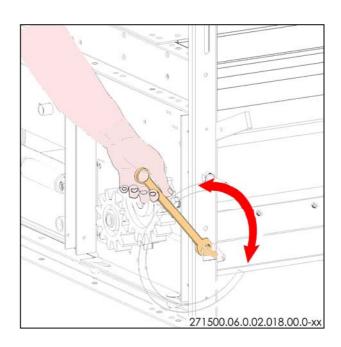


Disconnect all electrical connections before proceeding operation.

1. Turn the adjusting bolt to the left to loosen the pinch roller



The position of the pinch roller should be equal for left-hand side as well as for the right-hand side, this to prevent the deviation of the manure belt





6.6.3 Check pinch roller position



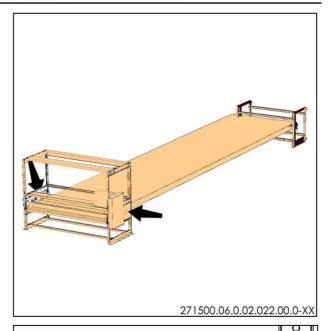
Disconnect all electrical connections before proceeding operation.

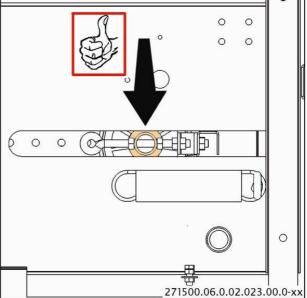
1. Check the pinch roller position in the belt adjusting unit. This should be in the middle of the range.

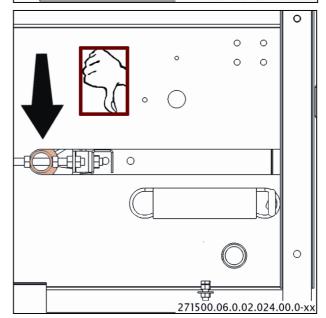


Pay attention: this check should be done when the system is in standstill mode.

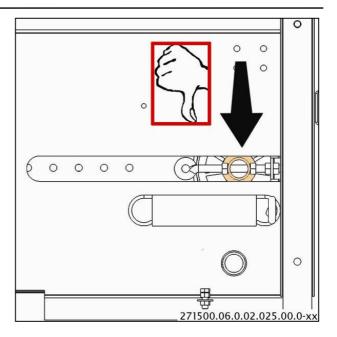
- Position of the pinch roller in figure 271500.06.0.02.023.00.0-xx is correct
- Position of the pinch roller in figure 271500.06.0.02.024.00.0-xx is incorrect
- Position of the pinch roller in figure 271500.06.0.02.025.00.0-xx is incorrect











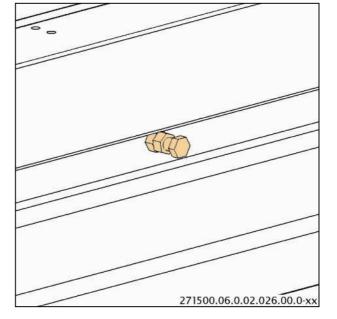


#### 6.6.4 Adjusting Pinch roller



Disconnect all electrical connections before proceeding operation.

- Loosen the bolt in the middle of the tensionbeam so that it is tensionfree Pay attention: these bolts are only used fore MBA from 2.0 meter +35 sections and lager
- 2. Loosen pinch roller till the springs are tensionfree (see 6.6.2)
- Fasten the bolt in middle of the tensionbeam till it gets under tension.
   Than turn the bolt 3 more times.
   Pay attention: these bolts are only used fore MBA from 2.0 meter +35 sections and larger
- 4. Fasten the pinch roller till the springs are pushed in halfway (see 6.6.1)





Pay attention: adjust the (red) spring right and left side equally. Take smale steps for example: 1 turn on the left and than 1 turn on the right side.



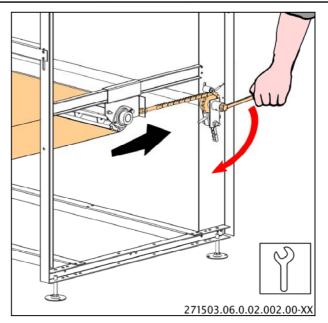
#### 6.7 Return unit

#### 6.7.1 Tighten return unit



Disconect all electrical connections before proceeding operation.

- 1. Check if the spring of the fixing handle is fixed
- 1. Turn the adjusting bolt to the right to tighten the manure belt



#### 6.7.2 Release return unit

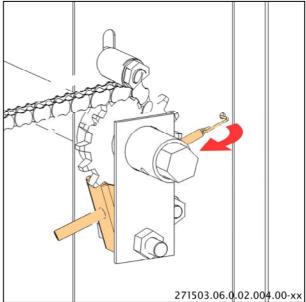


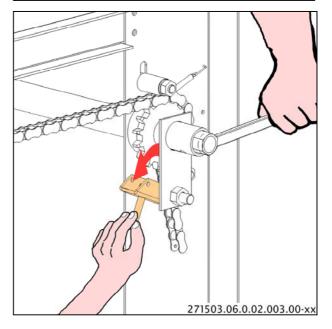
Disconect all electrical connections before proceeding operation.

- 1. Release fixing handle
- 2. Turn the adjusting bolt a little bit to the right
- 3. Keep the pressure on the adjusting bolt
- 4. Remove the fixing handle from the gear wheel
- 5. Gentlely release the pressure from the adjusting bolt (release fork spanner)



Pay attention!. Carry out Step 1 up to and including 5 for the left-side as well as for the right-side







## 6.8 Removing dirt

6.8.1 Removing dirt from scraper



Disconect all electrical connections before proceeding operation.

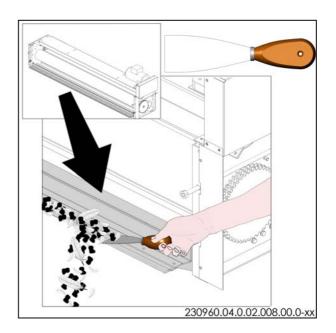
1. Release scraper (see: 1.5.2)

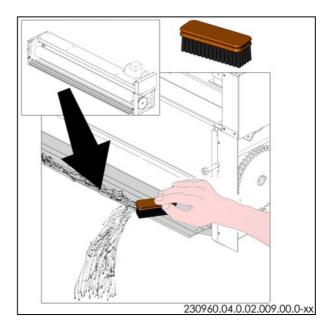
2. Remove dirt with the added filling knife

3. Brush off the remaining dirt with the added brush



After cleaning always check if the electrical components are dry





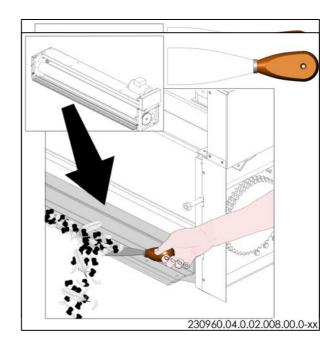


#### 6.8.2 Removing dirt from pinch roller



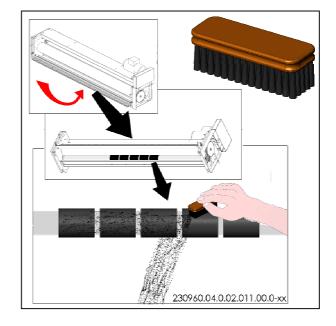
Disconect all electrical connections before proceeding operation.

- 1. Release scraper (see: 1.5.2)
- 2. Remove dirt with the added filling knife
- 3. Brush off the remaining dirt with the added brush





After cleaning always check if the electrical components are dry





6.8.3 Removing dirt from the manurebelt-support

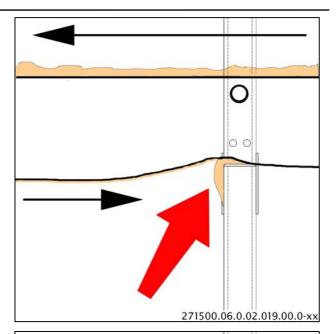


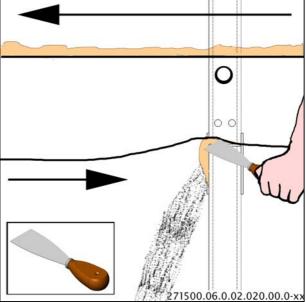
Disconect all electrical connections before proceeding operation.

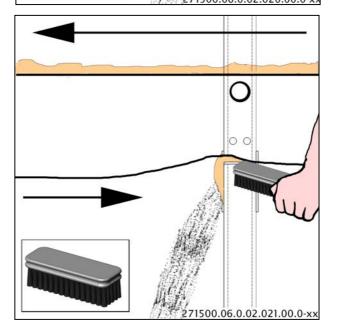
- 1. Remove dirt from the manurebeltsupport with the added filling knife.
- 2. Brush off the remaining dirt from the manurebelt-support with the added brush.
- 3. Repeat step 1 and 2 for all manurebelt-supports



After cleaning always check if the electrical Components are dry







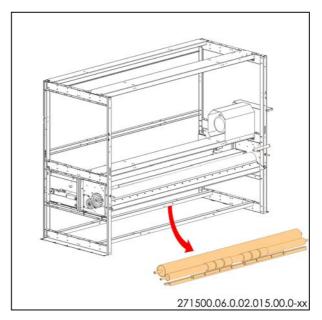


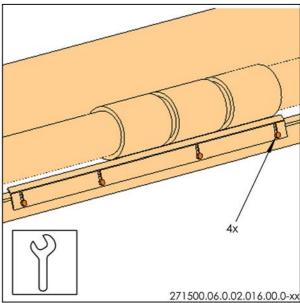
6.8.4 Regulating scraper pinch roller

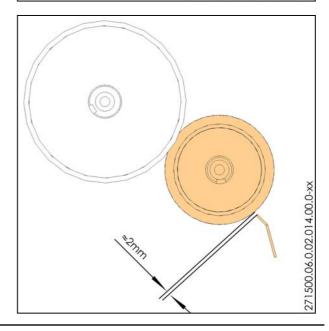


Disconect all electrical connections before proceeding operation.

- 1. Loosen bolts
- 2. Move the scraper pinch roller so that the space between pinch roller and scraper is 2mm
- 3. Fasten bolts







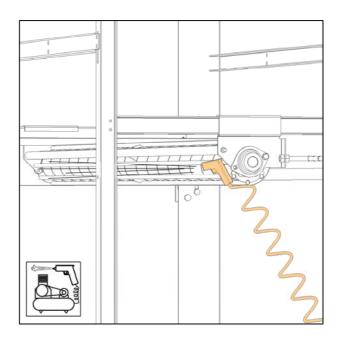


#### 6.8.5 Removing dirt from cage roller



Disconect all electrical connections before proceeding operation.

- 1. Remove the dirt in the cage roller with compressed air
- 2. Let the manure belt run For a moment
- 3. Repeat step 1



## 6.8.6 Removing dirt under manure belt drive unit



Disconect all electrical connections before proceeding operation.

1. Remove the dirt that is piled up under the manure belt drive unit





## 7 Settings

## 7.1 Settings table



Disconect all electrical connections before proceeding operation.

Frequency	What to do
Settings when putting into use	Check tension manure belt
	Check manure belt position
	Check if the manure belt slips
	Check scraper pinch roller
	Check if the scraper is tightened
Settings during 'in operation' situation	Adjust scraper onto the manure belt
	Check if the bearings run smooth
	Check tension manure belt
	Check manure belt position
	Check if the manure belt slips
	Check scraper pinch roller
	Check if the scraper is tightened
Setting after one flock	Release manure belt
Settings before starting a new flock	See " Settings when putting into use "



## 8 Maintenance



Disconect all electrical connections before proceeding operation.



Always check if the electrical connections are dry after cleaning.

Frequency	What tot do	Where on the machine
After installation	Check tension manure belt	MBR* hexagon in tube
	Check manure belt position	Adjusting bolts on MBA, chainbolts on MBR
	Check if the manure belt slips	Adjusting bolts under MBA
	Check scraper pinch roller	Underside MBA
	Release scraper	Scraper at the front of the MBA
Maintenance before putting into use	Tighten scraper	Scraper at the front of the MBA
'in use' Situation:		
Every 2 days (manurebeltsystems shorter then 80 meter without manuredrying)	Clean manure belt	Total system
Every 3 days (manurebeltsystems shorter then 80 meter with manuredrying)	Clean manure belt	Total system
Every day	Clean manure belt	Total system
(manurebeltsystems longer than 80 meter without manuredrying)		
Every 2 days (manurebeltsystems longer than 80 meter with manuredrying)	Clean manure belt	Total system

<sup>\*</sup>MBA = Manure belt drive unit

<sup>\*\*</sup>BSU = Manurebelt return unit



Maintenance after 'being in opperation' Situation	Release scraper	MBA*
	Remove dirt from scraper	MBA
	Remove dirt under manure belt drive unit	MBR
	Remove dirt from cage roller	MBR
	Remove dirt in MBA	MBA
	Regulate manure belt position (if necessary)	Adjusting bolts on MBA
	Regulate manure belt position (if necessary)	MBR
	Remove dirt from manurebelt-support	Housing
Maintenance after after one flock	Release return unit	MBR
Yearly maintenance/ maintenance after after 1 flock	Clean MBA and MBR	MBA and MBR
	Clean motor reductor (cooling fins and paddle wheel)	MBA
	Check motor reductors	MBA
	Check oillevel motor reductor	MBA
	Check electrical fuctions	MBA
	Check electrical connenctions	MBA
	Dry terminal board	MBA
	Tighten chain	MBA
	Lubricate chain	MBA
	Lubricate adjusting bolts	MBA
	Check on rust/ corrosion	MBA and MBR
	Check all parts that are subject to wear and tear: chain wheels, chains, plastics, gear wheels, thrust block (only used in 2,3 m drive units), pinch roller, bearings, adjusting bolts, springs, scrapers, chain tightener.	MBA and MBR
	Rust/corrosion prevention	MBA and MBR

<sup>\*</sup>MBA = Manure belt drive unit

<sup>\*\*</sup>BSU = Manurebelt return unit



## 9 Failure

## 9.1 Failure table



Disconect all electrical connections before proceeding operation.

Failure	Cause	Solution
Manure belt does not get clean	Scraper is dirty or is not in contact with the manure belt	Clean scraper and adjust the scraper onto the manure belt
	Drive roller is dirty	Clean drive roller
	Pinch roller is dirty	Clean pinch roller
	Pinch roller wrongly adjusted	Clean entire system and subsequently tighten pinch roller
	Pinch roller worn	Replace pinch roller
	Manure belt return wrongly adjusted	Tighten manurebelt near MBR*
	To much manure on the manure belt	Remove manure by hand and increase the frequency of cleaning the manure belt
	Water on the manure belt	Remove water by hand and increase the frequency of cleaning the manure belt
Motor not running	To much manure on the manure belt	Remove manure by hand and increase the frequency of cleaning the manure belt
	Bad electrical contact	Check all electrical connections
	Motor broken	Replace motor
Motor stalls	To much manure on the manure belt	Remove manure by hand and increase the frequency of cleaning the manure belt
	Bad electrical contact	Check all electrical connections
Motor makes noise	Chain tension fault	Tighten Drive chain If necessary replace chain and chain wheels
	No chain lubrication	Lubricate chain with lubrication
	No or not enough lubricant in motor reductor	Refill oil according to table
	Dent in the lid of the motorfan	Remove dents from the lid of the motorfan
Manure belt position in the system is wrong	Manure unequaly spreaded	rearrange the perches, feeding system and drinking line in the system
	Pinch roller not equaly adjusted	Regulate manure belt position
Manure belt slips	Tension on pinch roller Manure belt return unit incorrect	Readjust (red) tension springs Manurebelt return unit



Driveroller slips	Pinch roller wrongly tightened	Tighten pinch roller equally
	Water	Remove water by hand Look up the problem and fix the leakage

<sup>\*</sup>MBA = Manure belt drive unit

<sup>\*\*</sup>BSU = Manurebelt return unit



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